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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,108	08/01/2003	Jan Civlin	SUNMP318/P9292	3633

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EXAMINER

KANG, INSUN

ART UNIT PAPER NUMBER

2193

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/633,108	CIVLIN, JAN	
	Examiner	Art Unit	
	Insun Kang	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006 and 01 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responding to application papers dated 7/3/2006 and 8/1/2003.
2. Claims 1-18 are pending in the application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Lethin et al. (US 6,463,582) hereafter Lethin.

Per claim 1:

Lethin discloses:

-identifying binary code for a program; obtaining a portion of the binary code; executing the portion of the binary code while optimizing the portion of the binary code,(i.e. This logging of information identifies some of the instructions and some of the join points...the system is designed to allow optimized code to be replaces as more information becomes available... The dynamic compilation chooses which portions of the text to optimize based on profiling information gathered by the interpreter,” col. 5 lines 10-28) the executing identifying dynamic changes in flow to enable additional

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portions of the binary code to be obtained and executed (i.e. When the number of times some branch is executed exceeds a threshold number, the destination of that branch becomes a seed for compilation," col. 5 lines 21-43); and saving the executed and optimized portion of the binary code and any additional portions of the binary code to an optimized binary code file for the program (i.e. Branch logger 112 then uses a seed selection method to determine which seeds to send to compiler 104. Block picker 114 then uses the seed and branch profile information to choose a segment of the original code to compile," col. 6 lines 1-17; "Optimizing code generation unit 118 performs the actual compilation of original instructions into translated code segment instructions... along with information about the segment being compiled is finally passed to segment installation unit... which makes the code available to the interpreter," col. 6 lines 10-16).

Per claim 2:

The rejection of claim 1 is incorporated, and further, Lethin teaches:

continuing obtaining and executing portions of the binary code until all portions of the binary code have been saved to the optimized binary code file for the program (i.e. fig 27).

Per claim 3:

The rejection of claim 2 is incorporated, and further, Lethin teaches:

executing the optimized binary code file for the program; detecting a missing additional portion associated with a dynamic change in flow detected during execution of a portion of the optimized binary code file for the program; obtaining the missing additional portion from the binary code for the program; executing the missing additional portion; and saving the executed missing additional portion to the optimized binary code file for the program (i.e. fig 27; col. 5 lines 21-43; col. 6 lines 1-17).

Per claim 4:

The rejection of claim 1 is incorporated, and further, Lethin teaches:

wherein the dynamic changes in flow include a jump instruction (i.e. branch, col. 5 lines 21-43).

Per claim 5:

The rejection of claim 1 is incorporated, and further, Lethin teaches:

wherein the optimizing is configured to optimize the portion of the binary code for a new hardware architecture (i.e. col. 5 lines 54-64).

Per claims 6-9, they are another method versions of claims 1-5, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-5 above.

Per claims 10-14, they are the media versions of claims 1-5, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-5 above.

Per claims 15-18, they are the media versions of claims 6-9, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 6-9 above.

5. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Hicks (US 7,100,154).

Per claim 1:

Hicks discloses:

identifying binary code for a program; obtaining a portion of the binary code; executing the portion of the binary code while optimizing the portion of the binary code (i.e. "decide which program portions should be dynamically compiled whey they should be dynamically compiled...and optimized," col. 5 lines 5-22), the executing identifying dynamic changes in flow to enable additional portions of the binary code to be obtained and executed (i.e. persistent execution statistics 127 is a count of the number of times each path is taken at each branch in a computer program," col. 6 lines 25-35); and saving the executed and optimized portion of the binary code and any additional portions of the binary code to an optimized binary code file for the program (i.e. storing the execution statistics for a computer program in a persistent tore so that a dynamic compiler may use these executions static during subsequent executions of the computer program to decide which program portions should be dynamically compiled...and optimized...without having to wait for the collection of execution

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statistics for the current execution to determine what to dynamically compile...and optimize," col. 5 lines 5-23).

Per claim 2:

The rejection of claim 1 is incorporated, and further, Hicks teaches:

continuing obtaining and executing portions of the binary code until all portions of the binary code have been saved to the optimized binary code file for the program (i.e. col. 4 lines 55-60).

Per claim 3:

The rejection of claim 2 is incorporated, and further, Hicks teaches:

executing the optimized binary code file for the program; detecting a missing additional portion associated with a dynamic change in flow detected during execution of a portion of the optimized binary code file for the program; obtaining the missing additional portion from the binary code for the program; executing the missing additional portion; and saving the executed missing additional portion to the optimized binary code file for the program (i.e. col. 5 lines 5-23).

Per claim 4:

The rejection of claim 1 is incorporated, and further, Hicks teaches:

wherein the dynamic changes in flow include a jump instruction (i.e. branch, col. 6 lines 25-35).

Per claim 5:

The rejection of claim 1 is incorporated, and further, Hicks teaches:

wherein the optimizing is configured to optimize the portion of the binary code for a new hardware architecture(i.e. col. 5 lines 5-23).

Per claims 6-9, they are another method versions of claims 1-5, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-5 above.

Per claims 10-14, they are the media versions of claims 1-5, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-5 above.

Per claims 15-18, they are the media versions of claims 6-9, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 6-9 above.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-R 6:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MENG AI AN can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER